

Notice of Allowability

Application No.

09/885,269

Examiner

Michael J. Feely

Applicant(s)

CRANE ET AL.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 3/13/2006.
2. ☒ The allowed claim(s) is/are 2-4,7,8,10,12,14 and 16-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 0406.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Art Unit: 1712

EXAMINER'S AMENDMENT

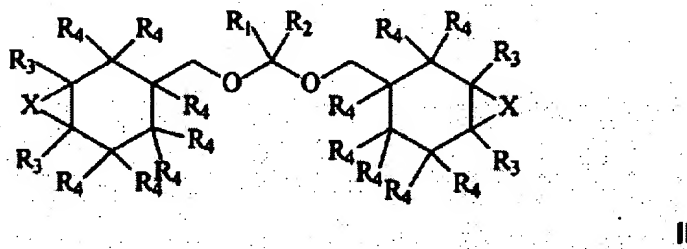
1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven C. Bauman (Reg. No. 33,832) on April 3, 2006.

The application has been amended as follows:

In the Claims:

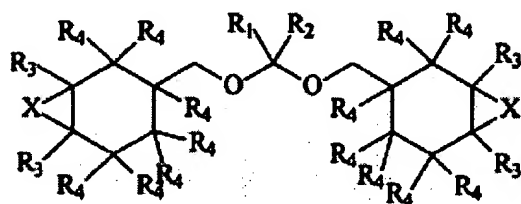
2. (Currently Amended) A curable composition comprising a compound having at least one thermally cleavable linkage represented by the formula:



where R_1 and R_2 are each independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; each R_3 is independently selected from the group consisting of hydrogen, methyl, ethyl, propyl and isopropyl; each R_4 is independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl, butyl, isobutyl, *t*-butyl, C_{1-4} alkoxy, halogen, cyano, and nitro; and X is independently selected from O and S, provided that at least one X is S.

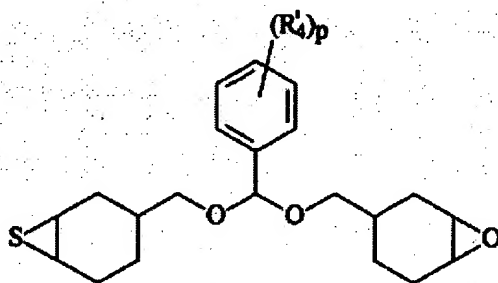
Art Unit: 1712

4. (Currently Amended) A curable composition comprising a compound having at least one thermally cleavable linkage represented by the formula:



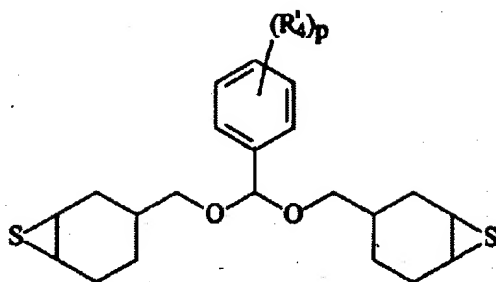
II

where R_1 and R_2 are each independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, ethylphenyl, propylphenyl, and benzyl; each R_3 is independently selected from the group consisting of hydrogen, methyl, ethyl, propyl and isopropyl; each R_4 is independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl, butyl, isobutyl, *t*-butyl, C_{1-4} alkoxy, halogen, cyano, and nitro; and X is independently selected from O and S, provided that at least one X is S, wherein said compound is selected from the group consisting of:

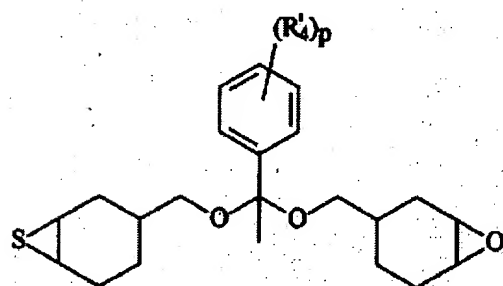


VII

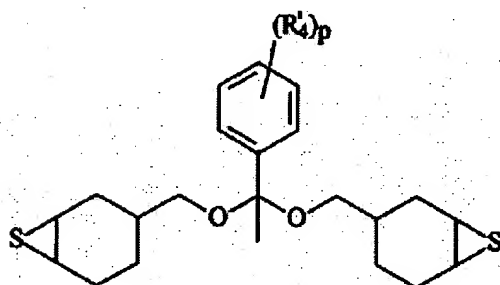
Art Unit: 1712



VII'



VIII



VIII'

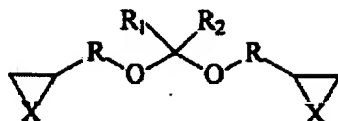
wherein R'_4 is a member selected from the group consisting of hydrogen, methyl, ethyl and propyl; and p is 1-5.

10. (Currently Amended) A thermosetting resin composition comprising:

I) a curable resin component, at least a portion of which comprises a curable composition comprising a compound having at least one thermally cleavable linkage and being selected from the group consisting of:

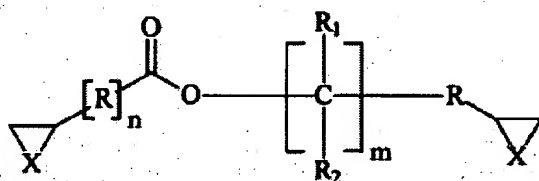
Art Unit: 1712

a)



where each R is independently selected from the group consisting of C₁-C₁₀ alkylene, cycloalkylene, arylene, aralkylene, and alkarylene; R₁ and R₂ are each independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; and X is independently selected from O and S, provided that at least one X is S; and

b)



where each R is independently selected from the group consisting of C₁-C₁₀ alkylene, cycloalkylene, arylene, aralkylene, and alkarylene; R₁ and R₂ are each independently selected from the group consisting of hydrogen, methyl, ethyl, propyl, phenyl, hydroxyphenyl, methoxyphenyl, tolyl, and benzyl; m is 0 or 1; n is 0 or 1; and X is independently selected from O and S, provided that at least one X is S;

and combinations thereof;

Art Unit: 1712

II) a curing agent component comprising a member selected from the group consisting of anhydride compounds, amine compounds, amide compounds, imidazole compounds, and combinations thereof;

III) one or more materials selected from the group consisting of flowability agents, adhesion promoters, and cyanate esters; and

IV) optionally, an inorganic filler component.

Allowable Subject Matter

2. Claims 2-4, 7, 8, 10, 12, 14, and 16-25 are allowed.

Art Unit: 1712

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael J. Feely
Primary Examiner
Art Unit 1712

April 3, 2006

MICHAEL FEELY
PRIMARY EXAMINER